Listing of the Claims

1. (Currently amended) A method of preparing a sample substantially free of genomic DNA, comprising the following steps:

(a) forming a tissue or cell lysate from a biological sample, wherein said lysate contains genomic DNA;

(b) contacting a pre-filtration column with said lysate, wherein said pre-filtration column comprises a filter material, wherein said filter material has at least one layer of glass or borosilicate fiber, whereby genomic DNA is bound to said filter material;

(c) collecting ~~a first~~ effluent from said column, wherein said ~~first~~ effluent is substantially free of said genomic DNA;

(d) contacting a silicon carbide whisker column with said ~~first~~ effluent of (c), whereby nucleic acids are bound to said silicon carbide; and

(e) ~~collecting a second effluent~~ eluting said nucleic acid from said silicon carbide whisker column~~, wherein said second effluent is essentially free of genomic DNA~~.

2. (Original) The method of claim 1, wherein said lysate is formed employing a lysis buffer comprising a chaotropic agent.

3. (Original) The method of claim 2, wherein said chaotropic agent is selected from a group consisting of guanidine isothiocyanate, ammonium isothiocyanate, guanidine hydrochloride and combinations thereof.

4. (Original) The method of claim 2, wherein said chaotropic agent is at a concentration ranging from about 0.5 M to about 5.0 M.

5. (Previously presented) The method of claim 1, wherein said biological sample is selected from the group consisting of animal tissues, plant tissues, animal cells, plant cells and combinations thereof.

6. (Previously presented) The method of claim 5, wherein said animal tissues or cells are selected from the group consisting of blood, urine, hair, skin, muscle, bone, bodily fluids, organ extracts and alike.

7. (Original) The method of claim 1, wherein said filter material has a particle retention ranging from about 0.1 μm to about 10 μm.

8. (Original) The method of claim 1, wherein said filter material has a thickness ranging from about 50 μm to about 2000 μm.

9. (Original) The method of claim 1, wherein said filter material has a specific weight ranging from about 75 g/m^2 to about 300 g/m^2.

10.-23. (Cancelled)

24. (Currently amended) A method of isolating nucleic acid from a sample matrix, comprising the following steps:

(a) forming a tissue or cell lysate from said sample matrix, wherein said lysate contains genomic DNA;

(b) contacting a pre-filtration column with said lysate, wherein said pre-filtration column comprises a filter material, wherein said filter material has at least one layer of glass or borosilicate fiber, whereby genomic DNA is bound to said filter material;

(c) collecting effluent from said column, wherein said effluent is substantially free of said genomic DNA;

(d) contacting a silicon carbide whisker column with said effluent of (c), whereby nucleic acids are bound to said silicon carbide;

(e) contacting said silicon carbide-bound nucleic acids with DNAse, under conditions suitable for DNA digestion; and

(f) eluting said nucleic acid from said silicon carbide whisker column.

25. (Original) The method of claim 24, wherein said nucleic acid is RNA.

26. (Original) The method of claim 24, wherein step (c) includes DNA digestion.

27. (Previously presented) The method of claim 24, wherein one or more chaotropic agents are used in a lysis buffer of step (a).

28. (Previously presented) The method of claim 27, wherein said one or more chaotropic agents is selected from the group consisting of guanidine isothiocyanate, ammonium isothiocyanate, guanidine hydrochloride and combinations thereof.

29. (Previously presented) The method of claim 27, wherein said one or more chaotropic agents is at a concentration ranging from about 0.5 M to about 5.0 M.

30. (Original) The method of claim 24, wherein one or more organic solvent binding enhancers are included in step (a).

31. (Original) The method of claim 30, wherein said enhancer is an alcohol selected from the group consisting of methanol, ethanol, isopropanol and combinations thereof.

32. (Previously presented) The method of claim 24, wherein said silicon carbide whiskers column has a frit, and silicon carbide whiskers adjacent to said frit.

33. (Original) The method of claim 24, wherein said lysis buffer comprises β-mercaptoethanol.

34. (Original) The method of claim 24, wherein said lysis buffer has a pH in the range from about 4 to about 8.

35. (Original) The method of claim 24, wherein said elution of step (e) is performed using an elution buffer selected from the group consisting of nuclease free H_2O, EDTA, and sodium citrate.

36. (Original) The method of claim 35, wherein said elution buffer has a pH ranging from about 6 to about 9.

37. (Previously presented) The method of claim 24 further comprising the step of adding a DNase, under conditions suitable for DNA digestion, to an eluate obtained from said eluting step (f).